

1. A system for producing work comprising:

a fluid chamber adapted to hold a first fluid;

a float tank positioned within the fluid chamber, the float tank adapted to receive the first fluid from the fluid chamber, the float tank having variable buoyancy allowing descent to a lower position and ascent to a higher position within the float chamber;

a convertor for converting mechanical energy into work operatively connected to the float tank;

a drain tank vertically positioned in the fluid chamber near the lower position of the descent of the float tank in the fluid chamber, the drain tank adapted to gravitationally receive the first fluid from the float tank;

a plug slidably connected within the drain tank, the plug adapted to remain stationary as the drain tank gravitationally descends around the plug, the plug adapted to gravitationally descend through the drain tank as the drain tank remains stationary; and

wherein as the drain tank gravitationally descends around the plug the first fluid in the drain tank flows into the fluid chamber, and wherein as the plug gravitationally descends through the drain tank air is drawn into the drain tank permitting the drain tank and the plug to buoyantly ascend.

2. The system of claim 1 wherein the float tank comprises:  
an inner chamber for holding the first fluid and air;  
a drain valve to allow fluid communication with the inner  
chamber; and

5 an air vent valve to expel air as the first fluid flows into the  
inner chamber and to draw air in when the first fluid flows out of the inner  
chamber.

3. The system of claim 2 further comprising:

10 a float tank drain receiver valve attached to the drain tank and  
operatively connected to the drain valve of the float tank;

an air vent valve attached to the drain tank; and

an air pipe having an upper vent valve and a lower vent valve,  
the air pipe positioned so as to enable the air vent valve attached to the  
15 drain tank to operatively couple with the upper vent valve when the drain  
tank is ascended and to operatively couple with the lower vent valve when  
the drain tank is descended.

4. The system of claim 1 further comprising a plurality of the  
20 float tanks, the plurality of the float tanks vertically positioned at relatively  
staggered elevations whereby at least one float tank is always descending  
and whereby the convertor is continuously generating work.

5. The system of claim 1 further comprising a float tank guide connected to the float tank, the float tank guide constraining the float tank to translate vertically between the lower position and the higher position.

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6. The system of claim 5 wherein the float tank guide comprises:  
a generally vertical guide post slidably contacting the float tank;

a float tank upper stop to set the higher position of the float tank vertical movement; and

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a float tank lower stop to set the lower position of the float tank vertical movement.

7. The system of claim 1 wherein the fluid chamber has an upper reservoir and a lower reservoir.

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8. The system of claim 7 wherein the drain tank is positioned in the lower reservoir.

9. The system of claim 7 wherein the convertor is a generator.

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10. The system of claim 9 further comprising:

a piston connected to the float tank;

5 a shaft adapted to allow the piston to vertically slide within at least a portion of the shaft, the shaft adapted to hold a second fluid, the shaft positioned between the float tank and the generator wherein the piston forces the second fluid to flow through the generator; and

a recycling pool positioned to receive the second fluid from the generator and recycle the second fluid back to the shaft.

10 11. The system of claim 10 wherein the recycling pool is positioned so as to allow for an equal amount of fluid that flowed through the generator to be recycled back to the shaft.

15 12. The system of claim 10 wherein the generator is a hydroelectric generator having a turbine intake and a turbine discharge whereby the second fluid passes out of the turbine discharge and into the recycling pool.

20 13. The system of claim 10 further comprising a generator valve interposed between the shaft and the generator, the generator valve adapted to prevent the float tank from descending until the float tank is filled with the first fluid.

14. The system of claim 10 further comprising a recycling pool valve interposed between the recycling pool and the shaft, the recycling pool valve configured to be open during ascent of the float tank whereby the piston draws the second fluid from the recycling pool back into the shaft.

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15. The system of claim 14 wherein the recycling pool valve is configured to remain closed while the first fluid drains from the float tank whereby the float tank remains at the lower position while the float tank is being drained.

16. A system for producing electricity comprising:

a fluid chamber having an upper reservoir and a lower reservoir, the fluid chamber adapted to hold a first fluid;

a float tank positioned within the fluid chamber, the float tank having an inner chamber for holding the first fluid and air, a drain valve to allow the first fluid into and out of the inner chamber, the first fluid rendering the float tank negatively or positively buoyant with respect to the first fluid in the fluid chamber, and an air vent valve to expel air being replaced with the first fluid and to draw air in when the first fluid is expelled, whereby the float tank has a variable buoyancy allowing descent to a lower position and ascent to a higher position within the float chamber;

a float tank guide connected to the float tank, the float tank guide having a generally vertical guide post slidably contacting the float tank, a float tank upper stop to set the higher position of the float tank vertical movement, and a float tank lower stop to set the lower position of the float tank vertical movement, whereby the float tank is constrained to translate vertically between the lower position and the higher position;

a hydroelectric generator for converting mechanical energy into electricity operatively connected to the float tank, the generator having a turbine intake and a turbine discharge;

a piston connected to the float tank;

a shaft adapted to allow the piston to vertically slide within at least a portion of the shaft, the shaft adapted to hold a second fluid, the

shaft positioned between the float tank and the generator whereby the piston forces the second fluid to flow through the generator;

a generator valve interposed between the shaft and the generator, the generator valve adapted to prevent the float tank from descending until the float tank is filled with the first fluid;

a recycling pool adapted to receive the second fluid from the turbine discharge of the generator and recycle the second fluid back to the shaft, the recycling pool positioned so as to allow for an equal amount of fluid that flowed through the generator to be recycled back to the shaft;

a recycling pool valve interposed between the recycling pool and the shaft, the recycling pool valve configured to be open during ascent of the float tank allowing the piston to draw the second fluid from the recycling pool into the shaft, the recycling pool valve configured to remain closed while the first fluid drains from the float tank whereby the float tank remains at the lower position while the float tank is being drained;

a drain tank vertically positioned in the lower reservoir of the fluid chamber near the lower position of the descent of the float tank in the fluid chamber, the drain tank adapted to gravitationally receive the first fluid from the float tank;

a plug slidably connected within the drain tank, the plug adapted to remain stationary as the drain tank gravitationally descends around the plug, the plug adapted to gravitationally descend within the drain tank as the drain tank remains stationary; and

wherein as the drain tank gravitationally descends around the plug the first fluid in the drain tank flows into the fluid chamber, and wherein as the plug gravitationally descends within the drain tank air is drawn into the drain tank permitting the drain tank and the plug to buoyantly ascend.



17. A system for generating electricity comprising:
- a fluid source;
  - an upper reservoir for holding a stored fluid from the fluid source;
  - a shaft having a straight portion, the shaft vertically communicating with the upper reservoir;
  - a shaft one-way valve operably connected to the shaft, the shaft one-way valve configured to pass water to a discharge end of the shaft;
  - a fluid replenishment source operably connected to the shaft for refilling the discharge line;
  - a float tank having variable buoyancy allowing descent and ascent within the upper reservoir, the float tank having a piston with an outer diameter less than the inner diameter of the discharge shaft and vertically translating within the shaft to force the stored fluid through the shaft during descent.

18. The system of claim 17 further comprising a shaft replenishment inlet valve interposed between the fluid replenishment source and the shaft, the replenishment inlet valve configured to open during ascent of the float tank.

19. The system of claim 18 wherein the fluid replenishment source is communicatively coupled with the fluid source.

20. The system of claim 19 wherein the float tank has an inner chamber for accepting ballast through a water vent to become negatively buoyant with respect to the stored fluid in the upper reservoir, and the inner chamber drains the ballast to become positively buoyant with respect to the stored fluid in the upper reservoir, allowing the float tank to translate vertically.

21. The system of claim 18 wherein the shaft replenishment inlet valve is configured to remain closed during draining of the float tank whereby the float tank remains at the bottom of the upper reservoir during the entire draining.